

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A face portion detecting apparatus comprising:

at least one illumination means for illuminating a face portion of a human being from different directions from each other;

photographing means for photographing the face portion which is illuminated by said illumination means;

illumination lighting control means for controlling turn-ON operation of said illumination means;

photographing control means for controlling said photographing means in synchronism with the turn-ON operation of said illumination means; and

face portion detecting means for removing a reflection image of an article having a luster reflection surface by employing at least one image which is acquired by said photographing means in synchronism with the turn-ON operation of said illumination means, whereby only a determined face portion is extracted[[]];

wherein:

said illumination lighting control means turns ON a plurality of illumination means in a continuous manner; and

while said face portion detecting means employs a plurality of images which are acquired by said photographing means in synchronism with the turn-ON operation of said illumination

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means, said face portion detecting means removes a reflection image whose reflection position is moved among said plurality of images as the reflection image of the article having the luster reflection surface.

2. (original): A face portion detecting apparatus according to claim 1 wherein:
said face portion corresponds to an eye portion, and
said face portion detecting means detects a retina reflection image which is formed by that the irradiation light of said illumination means is reflected on a retina of the human being.

3. (canceled).

4. (currently amended): A face portion detecting apparatus ~~according to claim 2~~
comprising:

at least one illumination means for illuminating a face portion of a human being from different directions from each other;

photographing means for photographing the face portion which is illuminated by said illumination means;

illumination lighting control means for controlling turn-ON operation of said illumination means;

photographing control means for controlling said photographing means in synchronism with the turn-ON operation of said illumination means; and

face portion detecting means for removing a reflection image of an article having a luster reflection surface by employing at least one image which is acquired by said photographing means in synchronism with the turn-ON operation of said illumination means, whereby only a determined face portion is extracted;

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wherein:

said face portion corresponds to an eye portion;

said face portion detecting means detects a retina reflection image which is formed by that the irradiation light of said illumination means is reflected on a retina of the human being;

both the illumination lighting control means and the photographing control means synchronize turn-ON operation of at least said one illumination means with the photographic operation of said photographing operation;

said illumination lighting control means turns ON at least one illumination means while said photographing means photographs one image; and

said face portion detecting means detects as the retina reflection image, such a reflection image which is present within a constant region among the images acquired by said photographing means, and an illuminance level of which is higher than, or equal to a predetermined value.

5. (original): A face portion detecting apparatus according to claim 1 wherein:
at least a portion of said one illumination means is arranged within a range separated from an optical axis of said photographing means by a constant distance.

6. (original): A face portion detecting apparatus according to claim 1 wherein:
at least one of said plurality of illumination means is arranged within a range separated from the optical axis of said photographing means by a constant distance.

7. (currently amended): A face portion detecting apparatus ~~according to claim 2~~
comprising:

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at least one illumination means for illuminating a face portion of a human being from different directions from each other;

photographing means for photographing the face portion which is illuminated by said illumination means;

illumination lighting control means for controlling turn-ON operation of said illumination means;

photographing control means for controlling said photographing means in synchronism with the turn-ON operation of said illumination means; and

face portion detecting means for removing a reflection image of an article having a luster reflection surface by employing at least one image which is acquired by said photographing means in synchronism with the turn-ON operation of said illumination means, whereby only a determined face portion is extracted;

wherein:

said face portion corresponds to an eye portion;

said face portion detecting means detects a retina reflection image which is formed by that the irradiation light of said illumination means is reflected on a retina of the human being;

at least a portion of said one illumination means is arranged within a range separated from the optical axis of said photographing means by a constant distance, and said illumination means owns a predetermined shape;

said illumination lighting control means turns ON said illumination means while one image is photographed; and

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said face portion detecting means detects as the retina reflection image, such a reflection image which is present within constant region among the images acquired by said photographing means, and the luminance level of which is higher than, or equal to a predetermined value, and furthermore, removes such a reflection image having a shape identical to said predetermined shape of said illumination means as the reflection image of the article having the luster reflection surface.

8. (currently amended): A face portion detecting apparatus ~~according to claim 2~~
comprising:

at least one illumination means for illuminating a face portion of a human being from different directions from each other;

photographing means for photographing the face portion which is illuminated by said illumination means;

illumination lighting control means for controlling turn-ON operation of said illumination means;

photographing control means for controlling said photographing means in synchronism with the turn-ON operation of said illumination means; and

face portion detecting means for removing a reflection image of an article having a luster reflection surface by employing at least one image which is acquired by said photographing means in synchronism with the turn-ON operation of said illumination means, whereby only a determined face portion is extracted;

wherein:

said face portion corresponds to an eye portion;

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said face portion detecting means detects a retina reflection image which is formed by that the irradiation light of said illumination means is reflected on a retina of the human being;

at least one of said plurality of illumination means is arranged within a range separated from an optical axis of said photographing means by a constant distance, and said plurality of illumination means are arranged in such a manner that said plural illumination means constitute a predetermined shape;

said illumination lighting control means turns ON said plurality of illumination means while one image is photographed; and

said face portion detecting means detects as the retina reflection image, such a reflection image which is present within a constant region among the images acquired by said photographing means, and the luminance level of which is higher than, or equal to a predetermined value, and furthermore, removes such a reflection image having a shape identical to said predetermined shape of said plurality of illumination means as the reflection image of the article having the luster reflection surface.

9. (original): A face portion detecting apparatus according to claim 7 wherein:

said predetermined shape of the illumination means is a straight-line shape.

10. (original): A face portion detecting apparatus according to claim 7 wherein:

said predetermined shape of the illumination means is a coaxial shape with respect to the optical axis of said photographing means.

11. (original): A face portion detecting apparatus according to claim 1 wherein:

the irradiation light of said illumination means corresponds to near infrared rays.

12. (original): A face portion detecting apparatus according to claim 1 wherein:

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the irradiation light of said illumination means corresponds to infrared rays.